

What is claimed is:

1. A Factor VIII polypeptide having Factor VIII:C activity and containing at least one modification to said polypeptide between amino acids 1743 (Phe) and 1749 (Arg), 1888 (Ser) and 1919 (His), 1942 (Trp) and 1947 (Met), and between 1959 (Ser) and 1974 (Ala), wherein said at least one modification influences the binding affinity to low density lipoprotein receptor protein.
2. The Factor VIII polypeptide according to claim 1, further including at least one modification to said polypeptide between amino acids 2033 and 2172.
3. The Factor VIII polypeptide according to claim 2, further including at least one modification to said polypeptide chain between amino acids 2037 (Ile) and 2062 (Trp), and between 2108 (Asp) and 2118 (Asn).
4. The Factor VIII polypeptide according to claim 3, further including at least one modification to said polypeptide between amino acids 2154 (Thr) and 2158 (Ile).
5. The Factor VIII polypeptide according to claim 1, further including at least one modification to said polypeptide between amino acids 2112 (Trp) and 2115 (Tyr).
6. A DNA molecule encoding a Factor VIII polypeptide, said Factor VIII polypeptide having Factor VIII:C activity and containing at least one modification between amino acids 1743 (Phe) and 1749 (Arg), 1888 (Ser) and 1919 (His), 1942 (Trp) and 1947 (Met), 1959 (Ser) and 1974 (Ala), wherein said at least one modification influences the binding affinity to low density lipoprotein receptor protein.
7. The DNA molecule of claim 6, further encoding said Factor VIII polypeptide having at least one modification between amino acids 2033 and 2172.
8. An expression vector comprising a DNA molecule encoding a Factor VIII polypeptide, said Factor VIII polypeptide having Factor VIII:C activity and containing at least one modification to said polypeptide between amino acids 1743 (Phe) and 1749 (Arg),

1888 (Ser) and 1919 (His), 1942 (Trp) and 1947 (Met), 1959 (Ser) and 1974 (Ala), wherein said at least one modification influences the binding affinity to low density lipoprotein receptor protein.

9. The expression vector of claim 8, wherein said Factor VIII polypeptide further includes at least one modification between AS 2033 and 2172.

10. A transformed cell and its progeny comprising a DNA molecule encoding a Factor VIII polypeptide, said Factor VIII polypeptide having Factor VIII:C activity and containing at least one modification between amino acids 1743 (Phe) and 1749 (Arg), 1888 (Ser) and 1919 (His), 1942 (Trp) and 1947 (Met), 1959 (Ser) and 1974 (Ala), wherein said at least one modification influences the binding affinity to low density lipoprotein receptor protein.

11. The transformed cell of claim 10, wherein said Factor VIII polypeptide further includes a modification between AS 2033 and 2172.

12. A transformed cell and its progeny comprising an expression vector including a DNA molecule encoding a Factor VIII polypeptide, said Factor VIII polypeptide having Factor VIII:C activity and containing modifications between AS 1743 (Phe) and 1749 (Arg), AS 1888 (Ser) and 1919 (His), AS 1942 (Trp) and 1947 (Met), AS 1959 (Ser) and 1974 (Ala), wherein said modification influences the binding affinity to low density lipoprotein receptor protein.

13. The transformed cell of claim 12, wherein said Factor VIII polypeptide further includes a modification between AS 2033 and 2172.

14. A method for producing a Factor VIII polypeptide comprising:
growing a host cell in a culture medium, said host cell comprising an expression vector containing a transcription regulation region in the transcription direction and a translation initiation region which acts in said host cell;

incorporating a DNA sequence encoding said Factor VIII polypeptide into said host cell, said Factor VIII polypeptide having Factor VIII:C activity and containing a modification between AS 1743 (Phe) and 1749 (Arg), AS 1888 (Ser) and 1919 (His), AS 1942 (Trp) and

1947 (Met), AS 1959 (Ser) and 1974 (Ala) and/or 2033 and 2172, wherein said modifications influences the binding affinity of said Factor VIII polypeptide to a low density lipoprotein receptor protein;

regulating said translation initiation region and said transcription termination region of said expression vector; and

isolating said Factor VIII polypeptide.

15. A preparation comprising:

a molecule of Factor VIII,

said molecule of Factor VIII having Factor VIII:C activity and containing modifications between AS 1743 (Phe) and 1749 (Arg), AS 1888 (Ser) and 1919 (His), AS 1942 (Trp) and 1947 (Met), AS 1959 (Ser) and 1974 (Ala), said modifications influencing the binding affinity of said Factor VIII molecule to a low density lipoprotein receptor protein; and

a lipoprotein receptor protein antagonist.

16. The preparation according to claim 13, wherein said lipoprotein receptor protein antagonists are selected from the group consisting of RAP and soluble fragments of lipoprotein receptor protein.

17. The preparation according to claim 14, wherein said soluble fragments of lipoprotein receptor protein show a binding affinity to a Factor VIII-LRP binding site.

18. A method for treating of a coagulation disturbance comprising:

providing a Factor VIII polypeptide having Factor VIII:C activity, said Factor VIII polypeptide containing modifications between AS 1743 (Phe) and 1749 (Arg), AS 1888 (Ser) and 1919 (His), AS 1942 (Trp) and 1947 (Met), AS 1959 (Ser) and 1974 (Ala) and/or 2033 and 2172, wherein said modifications influence the binding affinity of said Factor VIII polypeptide to a low density lipoprotein receptor protein; and

administering said Factor VIII polypeptide to an individual.

19. A method for treating of a coagulation disturbance comprising:

providing a preparation comprising a molecule of Factor VIII having Factor VIII:C activity and containing modifications between AS 1743 (Phe) and 1749 (Arg), AS 1888 (Ser) and 1919 (His), AS 1942 (Trp) and 1947 (Met), AS 1959 (Ser) and 1974 (Ala) and/or 2033 and 2172, said modifications influencing the binding affinity of said Factor VII molecule to a low density lipoprotein receptor protein; and a polypeptide selected from the group consisting of lipoprotein receptor protein antagonists.

administering said preparation to an individual.

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